

**WEB BASED APPLICATION FOR EVENTS MANAGEMENT ON  
PT PERTAMINA (PERSERO) RU IV CILACAP**



**This Final Project is Composed as one of Conditions to Complete Bachelor Degree at  
The Department of Informatics Faculty of Communication and Informatics**

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**APPROVAL PAGE**

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**SCIENTIFIC PUBLICATION**

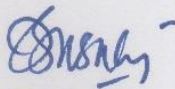
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**Submitted by**

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


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**WEB BASED APPLICATION FOR EVENTS MANAGEMENT ON PT PERTAMINA (PERSERO) RU IV CILACAP**

**Abstract**

PT Pertamina (Persero) Refinery Unit IV Cilacap is a company that has various department, one of them is IT department. One of the work programs undertaken by the IT department is to record all existing events then manage and display them in the form of a event calendar dashboard to be associated to the needs of the tools to organize the event. In fact, the event data collection in PT Pertamina (Persero) Refinery Unit IV Cilacap still done manually, then in this thesis the author try create a web based application used to record the event data. The creation of this application can be expected to help the admin to record and manage the events easily in one application without having some paper to record the events and convert the conventional method to the modern method with the role of todays information technology. The method used in making this application is observation method by seeing the event held and interview to

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# **WEB BASED APPLICATION FOR EVENTS MANAGEMENT ON PT PERTAMINA (PERSERO) RU IV CILACAP**

## **Abstrak**

PT Pertamina (Persero) Refinery Unit IV Cilacap adalah perusahaan yang memiliki berbagai departemen, salah satunya adalah departemen IT. Salah satu program kerja yang dimiliki departemen IT adalah untuk merekam semua berita acara dan mengatur serta menampilkan berita acara dalam bentuk papan kalender acara yang berkaitan dengan kebutuhan untuk mengatur acara tersebut. Faktanya, pengumpulan data acara di PT Pertamina (Persero) Refinery Unit IV Cilacap masih dilakukan secara manual, lalu di tugas akhir ini penulis mencoba untuk membuat aplikasi berbasis web yang digunakan untuk merekam data acara. Pembuatan aplikasi ini diharapkan dapat membantu administator merekam dan mengatur acara dengan mudah melalui satu aplikasi tanpa menggunakan kertas dalam merekam data acara dan mengkonversi metode konvensional menjadi metode modern dengan bantuan teknologi informasi terkini. Metode yang digunakan dalam pembuatan aplikasi ini adalah dengan melihat acara yang diadakan dan melakukan wawancara dengan karyawan bagian IT. Selanjutnya, program diciptakan menggunakan sistem basis data MySQL dan bahasa pemrograman PHP digabung dengan bahasa pemrograman lainnya. Hasil dari aplikasi ini adalah koleksi data acara dengan sistem komputerisasi dengan manajemen alokasi alat dan kebutuhan yang digunakan untuk acara dan menampilkan kalender acara dan daftar acara untuk acara selanjutnya yang dapat dikendalikan.

**Kata Kunci :** Aplikasi Berbasis Web, Basis Data, MySQL, PHP

## **Abstract**

PT Pertamina (Persero) Refinery Unit IV Cilacap is a company that has various department, one of them is IT department. One of the work programs undertaken by the IT department is to record all existing events then manage and display them in the form of a event calendar dashboard to be associated to the needs of the tools to organize the event. In fact, the event data collection in PT Pertamina (Persero) Refinery Unit IV Cilacap still done manually, then in this thesis the author try create a web based application used to record the event data. The creation of this application can be expected to help the admin to record and manage the events easily in one application without having some paper to record the events and convert the conventional method to the modern method with the role of todays information technology. The method used in making this application is observation method by seeing the event held and interview to The IT Workstation employee. In addition, the program is created using MySQL database system and PHP programming language combined with other programming languages. The result of this application is event data collection with computerized system with the management of the allocation of tools and needs used in the event and the display of event calendar and event list for the next can be controlled.

**Keywords :** Web Based Application, Database, MySQL, PHP



## 1. INTRODUCTION

Information technology is referred to the knowledge process and its applying methods, processing, transferring and making information in progress. IT includes gathering, organizing, storing, publishing and using the information in the form of sound , picture graphic, text, number by using the computer and telecommunication tolls (Hamidi, Meshkat, Rezaee & Jafari, 2011). Based on the previous statement so IT has a good impact if being implemented to complete the human work, one of the impact is that human can easily and quickly in completing the work only through one or several applications.

PT Pertamina (Persero) is a BUMN engaged in the exploration, processing and marketing of oil and gas mining products in Indonesia (Susanti, 2014). PT Pertamina (Persero) especially PT Pertamina (Persero) Refinery Unit IV Cilacap is a company that has various department, one of them is IT department. One form of service on the IT department of PT Pertamina (Persero) Refinery Unit IV Cilacap is to record the event which is then adjusted to the needs associated with the tools during the event took place, because the IT department is a department that organizes all the tools used in the event. Along with this, the author took the initiative to create a program design and database especially for event data collection on PT Pertamina (Persero) Refinery Unit IV Cilacap, because the event data collection there is still done manually which that way is not effective way especially PT Pertamina (Persero) is a big company that certainly will not speed up the work.

The creation of a web based application for event management on PT Pertamina (Persero) Refinery Unit IV Cilacap allows action to record events. Event data collection includes event title, when event starts, event date starts, event category (routine / non routine), pic event, event location. As for the needs of the event are the tools and pic sound system (technicians). After the event data have been collected, then the event will appear in the dashboard of the event calendar.

From the event calendar there is a detailed need of the tools used in an event that will be implemented for the next technician / PIC Sound System can see the needs of the tools in the event calendar dashboard then the technician / PIC Sound System able to prepare the tools. In addition, admin also provided data about events that have been or will be implemented along with details of its needs for the next admin can manage the event.

The design result allows the admin to record events that will be organized easily only by one application and after that can be adjusted any needs needed to organize the event. The needs will appear on the dashboard in the form of event calendar which there is already mentioned, so that technicians can prepare the needs of the event easily just by looking at the



screen without the admin must first tell the technician or technician requested the data needs for the event to the admin.

## **2. METHOD**

The number of events organized by PT Pertamina (Persero) Refinery Unit IV Cilacap make the conventional way of doing data collection and management of the event is no longer effective. PT Pertamina (Persero) Refinery Unit IV Cilacap is one of the big companies in Indonesia, therefore they need to make corrections and improvements for how to perform data collection and management of the existing events. Therefore, in this study the author tries to create a program design and database that is packaged in the form of web based application that aim to facilitate data collection and management of events. This web based application involves information technology so that the admin no longer needs conventional way such as the use of scrap paper to record events where paper usage can adversely affect the environment and increase the amount of waste. In the process of making this application, the author uses the Waterfall method. In this model, each phase has a specific phase and must be completed before the next phase begins (Sarker, Faruque, Hossen, & Rahman, 2015). Stages starting from *Analysis, Design, Development, Testing, Implementation & Maintenance*.

### **2.1. Requirements Analysis**

In the first stage of making this application, the author requires real data and information from the field to analyze the basic needs. The way that is done is by observation in PT Pertamina (Persero) RU IV Cilacap. Observation is divided into two methods. The first method is a direct interview with Junior Assistant Manager of IT Workstation, Mr. Rizal Ady Pratama, while the second is by looking at some events held by PT Pertamina (Persero) RU IV Cilacap either directly or through social media.

### **2.2. Design**

The second stage is design. At this stage the system design is adjusted from the results of the analysis stage. The design stage includes the details of Application Framework, the design of Use Case Diagram, Activity Diagram, Entity Relationship Diagram (ERD), and the design of this application interface.

a. Application Framework

Table 1. The details of Framework Application

Main Module	Sub Module
Main Index	Greeting Page
User (User Pertamina)	Login
	Event Calendar Display
	Add Event Form
User (Admin)	Login
	What's New
	List of Used Room
	List of Available Tools / Sound System
	Form for Record an Event
User (Technician / PIC Sound System)	Login
	Event Calendar Dashboard
	What's New
	List of Tools / Sound System
User (Common User)	Event Calendar

b. Use Case Diagram

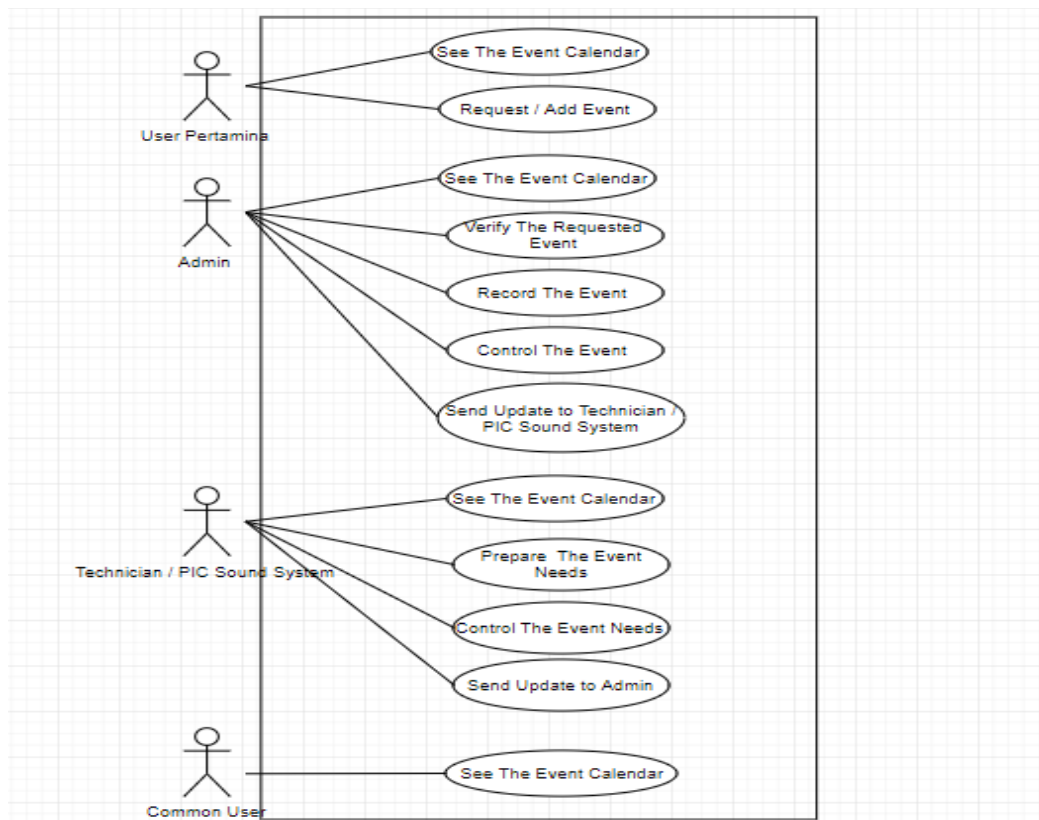


Figure 1. The design of Use Case Diagram

### c. Activity Diagram

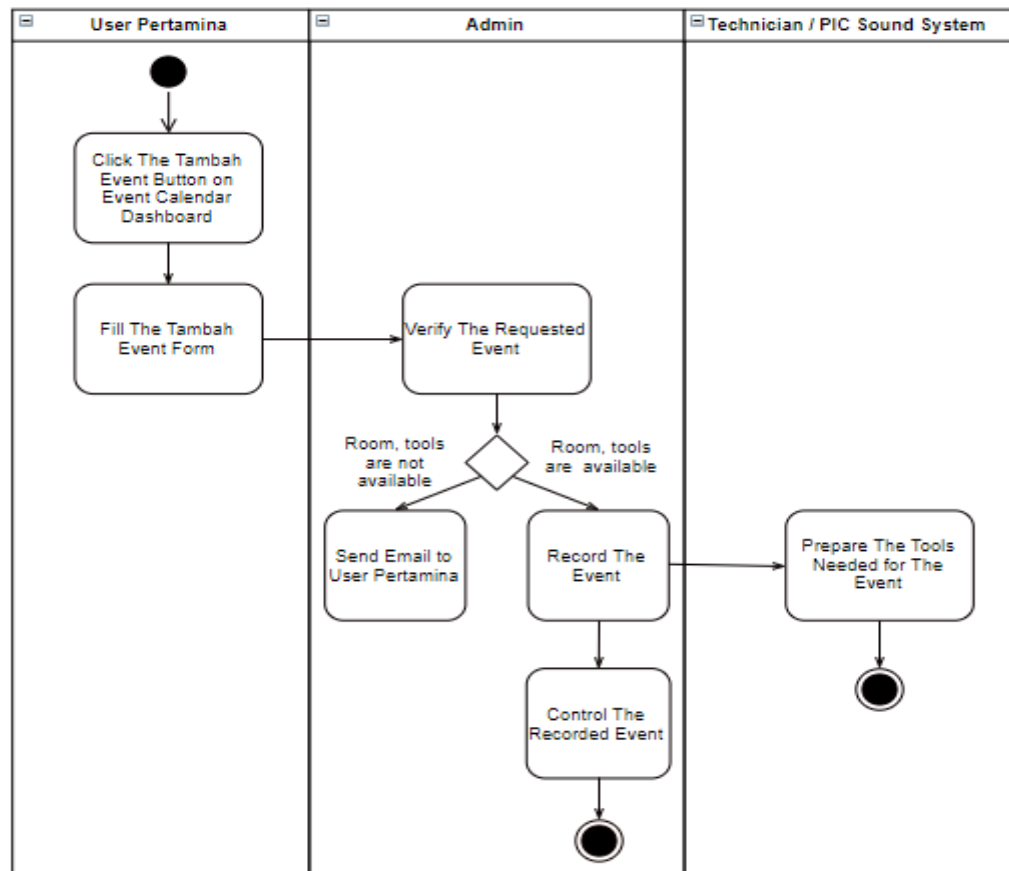


Figure 2. The design of Activity Diagram

### d. Entity Relationship Diagram (ERD)

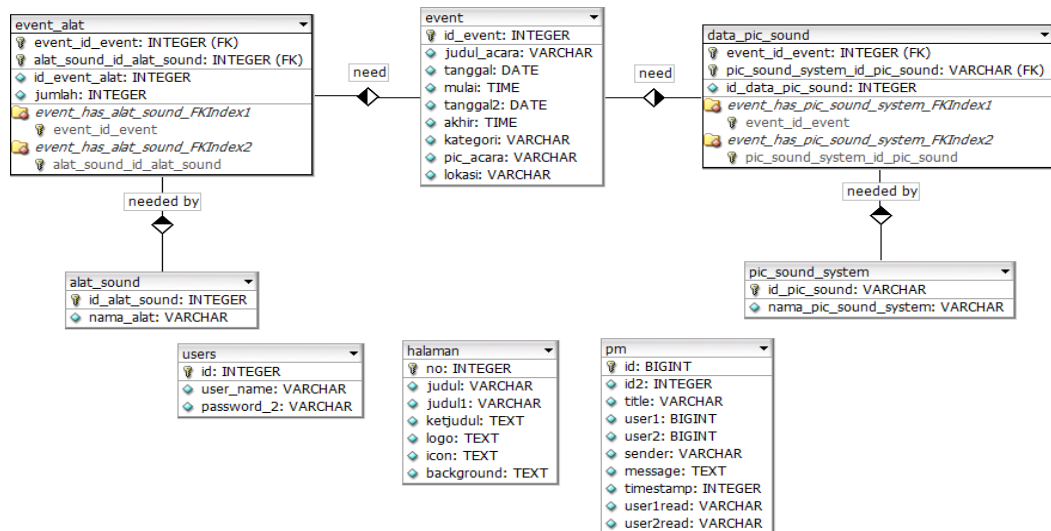


Figure 3. The design of Entity Relationship Diagram



## e. Interface

The screenshot shows a web application interface for PT Pertamina RU IV Cilacap. The top navigation bar includes the company logo, name, and an 'Account Info' link. A sidebar on the left contains a menu with options: Dashboard, Pengisian Data Event, List Kebutuhan (expanded), List Event, List Kebutuhan Alat, List Kebutuhan PIC Sound, Data Master (expanded), Data Sound System, Data PIC Sound System, Pengaturan, Profile, and Logout. The main content area is titled 'Form Pendataan Event' and contains input fields for Judul Acara, Kategori, Tanggal, Waktu, PIC Acara, Lokasi, Nama Alat, and PIC Sound System. A 'Simpan Data' button is located at the bottom right of the form.

Figure 4. The design of Web Based Application for Events Recording

The screenshot shows the same web application interface as Figure 4, but with a calendar view. The sidebar menu is identical. The main content area displays a calendar for January 2017. The calendar is a table with columns for days of the week (Mo, Tu, We, Th, Fr, Sa, Su) and rows for dates (1 to 31). The calendar is titled 'January 2017' and has navigation arrows at the top.

Figure 5. The design of Web Based Application for Event Calendar Dashboard

## 2.3. Development

At this stage, the creation or development of the application involves some software and programs such as XAMPP, Sublime Text 3, Google Chrome, and PHP programming language with MySQL database system.

## **2.4. Testing**

At this stage, the application is being tested by PT Pertamina (Persero) RU IV Cilacap, especially the IT Workstation and being socialized in the case of how to work and use the application to be used properly and can be tested properly. The goal is that if there is a mistake in the system then can be handled properly.

## **2.5. Implementation**

After the testing stage, so the next can be followed by implementing this application. The implementation is done by connecting this web based application with the two 42 inch monitor located at lobby area of head office and also at the technician / PIC Sound System room.

## **2.6. Maintenance**

The last stage is the maintenance stage. At this stage, the maintenance process is done on the underlying application so that applications can keep running in accordance with the SOP. The way that can be done is by delete data that has been backed up before to lighten the system work and reset the password and username for active users.

# **3. RESULT AND DISCUSSION**

This section will explain the results of the program implementation created by the author in Web Based Application for Events Management in accordance with The Application Framework at Table 1.

## **3.1. Main Index Module**

In Main Index Module there was a Greeting Page that allows the special user to access The Web Based Application for Events Recording (Masuk). The special user that allowed to Acces The Application are Admin. Technician / PIC Sound System, and User Pertamina.

In The Greeting Page also Available menu to display The Event Calendar for Common User and User Pertamina. The User can display that by clicking The Tampilkan Kalender Button. The Details are shown in Figure 6.



Figure 6. The Front Page

From The Figure 6 above, if the user are Admin and Technician / PIC Sound System, so they will be redirected to The Login Page (Figure 7).



Figure 7. The Login Page for Admin and Technician / PIC Sound System

### 3.2. User Pertamina Module

If the user are User Pertamina or Common User, they will redirected to The Event Calendar Display (Figure 8) by click The Tampilkan Kalender Button on Figure 6.



Kembali atau Tambah Event

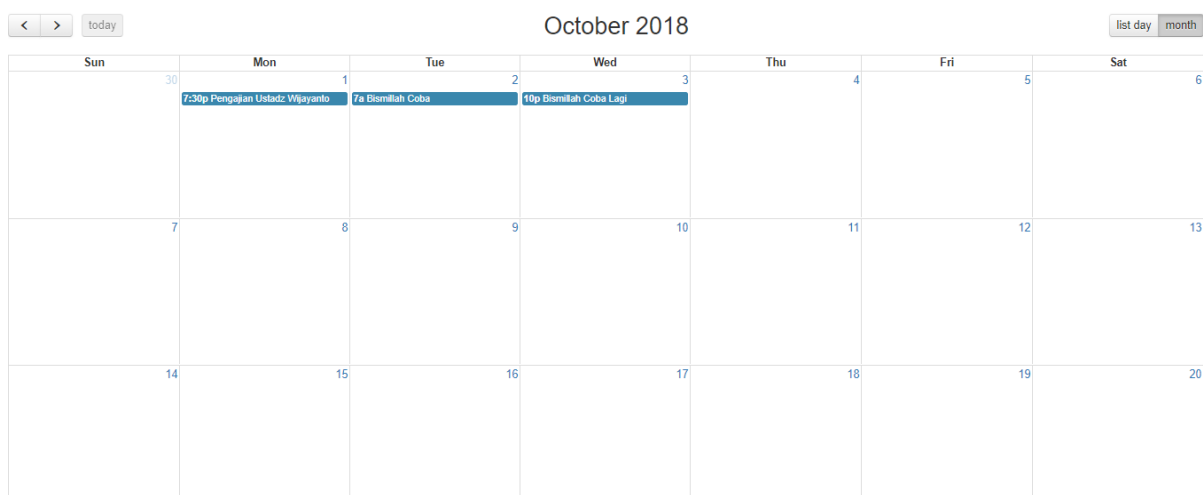


Figure 8. The Event Calendar Display for User Pertamina and Common User

From the figure above if the user are User Pertamina, they can click The Tambah Event Button if they want to held an event. After that, they will redirected to The Login Page and then to The Form to add an event. The Result will be show in Figure 9.

**FORM TAMBAH EVENT**

JUDUL (TAMBAH EVENT - NAMA ACARA) :

PENGINJIL (PIC ACARA) :

DETAIL :

Tanggal/Waktu, Tempat, Tambahan

JUMLAH PERALATAN SESUAI SOP

MIC STANDING	:(1)
MIC WIRELESS	:(3)
SPEAKER	:(3)
PROYEKTOR	:(2)
WIRELESS PORTABLE SPEAKER	:(2)
LAPTOP	:(1)
MONITOR	:(2)

APABILA ADA PERUBAHAN SILAKAN DITULIS DI KOLOM DETAIL, TERIMA KASIH

Kembali Send

Figure 9. The Form for Add an Event

### 3.3. Admin Module

To take a responsibility as an admin, the admin have to login first to this application. The Login Page can be seen in The Figure 7. After login, The Admin can receive the requested event given by The User Pertamina By Accessing The What's New page (Figure 10).

## What's New?

Update Terbaru(1):				
Judul	Kepada	Dari	Tanggal Pesan Dibuat	
Tambah Event - Donor Darah	admin.ru4	Yakes RU IV	2018/10/22 15:41:51	Sudah Dibaca

Figure 10. The What's New Page

The What's New Page is a general page. It can be accessed by Admin and Technician / PIC Sound System. If there are some update that given to them, so they can access The What's New Page.

Then, to verify the requested event by User Pertamina, first the admin can check whether the room is available or not by accessing The List of Used Room Page (Figure 11).

Daftar Ruangan Terpakai			
Event	Waktu	PIC Acara	Lokasi
Donor Darah	31-10-2018 08:00:00	Yakes RU IV	Gedung Patra Graha
Bismillah Coba Lagi	03-10-2018 22:00:00	Rofi	Lapangan RU IV Komperta Donan
Bismillah Coba	02-10-2018 07:00:00	Rofi	Lapangan RU IV Komperta Donan
Pengajian Ustadz Wijayanto	01-10-2018 19:30:00	BDI RU IV	Lapangan RU IV Komperta Donan
Sunat Masal	29-09-2018 07:30:00	Yakes RU IV	Lapangan RU IV Komperta Donan
Upacara HUT RI Ke-73	17-08-2018 07:00:00	Rizal Ady Pratama	Lapangan RU IV Komperta Donan
Pelepasan Jamaah Haji BDI RU I	13-08-2018 17:30:00	BDI RU IV	Masjid Pertamina RU IV
RU IV Fit, Health, Fun	13-07-2018 07:00:00	Yakes RU IV	Pertamina Komperta Donan
Donor Darah dan Pemeriksaan HI	26-06-2018 08:00:00	Yakes RU IV	Gedung Patra Graha
Halal Bi Halal	21-06-2018 07:30:00	Rizal Ady Pratama	Halaman Gedung HO

Figure 11. The List of Used Room Page

Second, the admin check whether the tools / sound system are available or not by accessing The List of Tools Page (Figure 12).

## Data Alat

Sound Systems			
Display	10 records	Search:	
<input type="checkbox"/>	ID	Nama Alat	Status
<input type="checkbox"/>	ALT001	Mic Standing	Tersedia
<input type="checkbox"/>	ALT002	Mic Wireless	Tersedia
<input type="checkbox"/>	ALT003	Speaker	Tersedia
<input type="checkbox"/>	ALT004	Proyektor	Tersedia
<input type="checkbox"/>	ALT005	Wireless Portable Speaker	Tersedia
<input type="checkbox"/>	ALT006	Laptop	Tersedia
<input type="checkbox"/>	ALT007	Monitor	Tersedia
Showing 1 to 7 of 7 entries			

Figure 12. The List of Tools Page

After all aspects have been verified, then the admin can record The Event by fill The Recording Event Form (Figure 13).

#### Form Pendataan Event

Judul Acara	:	<input type="text"/>
Kategori	:	<input type="text" value="Rutin"/>
Tanggal Mulai	:	<input type="text" value="mm/dd/yyyy"/>
Waktu Mulai	:	<input type="text" value="--:-- --"/>
Tanggal Akhir	:	<input type="text" value="mm/dd/yyyy"/>
Waktu Akhir	:	<input type="text" value="--:-- --"/>
PIC Acara	:	<input type="text"/>
Lokasi	:	<input type="text"/>
Nama Alat	:	<input type="text"/>
		<input type="text" value="Mic Standing"/> <input type="text" value="Unit"/>

Figure 13. The Form for Record an Event

### 3.4. Technician / PIC Sound System Module

To take a responsibility as an Technician / PIC Sound System, The Technician / PIC Sound System have to login first to this application. The Login Page can be seen in The Figure 7. After login, The Technician can see the event details by access an Event Calendar Dashboard for Technician / PIC Sound System (Figure 14).

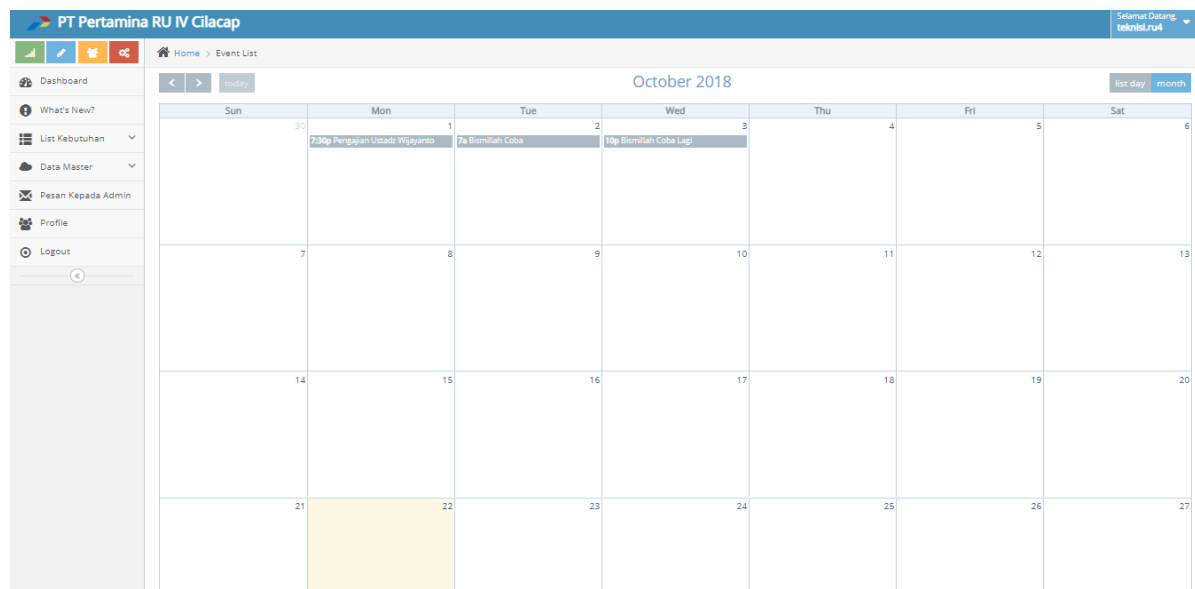


Figure 14. The Event Calendar Dashboard for Technician / PIC Sound System

To obtain the event details, The Technician / PIC Sound System can click the event on The Event Calendar Dashboard then the result will look like Figure 15.



### Pengajian Ustadz Wijayanto

ID Acara	: EVT012
Judul Acara	: Pengajian Ustadz Wijayanto
PIC Acara	: BDI RU IV
Lokasi Acara	: Lapangan RU IV Komperta Donan
PIC Sound System	: Samsul Ma'arif
Kebutuhan Alat	: Mic Standing (2) Mic Wireless (3) Speaker (2) Proyektor (2) Wireless Portable Speaker (2) Laptop (1) Monitor (1)















Tutup

Figure 15. The Event Details for Technician / PIC Sound System

After The Technician / PIC Sound System obtain the event details, so the next they can prepare the tools for held the event.

In other case, The Technician / PIC Sound System also has a responsibility to control or maintain the tools. While they maintain, they have to report the result to this application (Figure 16).

### Data Alat

Sound Systems							Tambah data +
<input type="checkbox"/>	ID	Nama Alat	Stok	Rusak	Perbaikan	Status	
<input type="checkbox"/>	ALT001	Mic Standing	15	0	0	Tersedia	 
<input type="checkbox"/>	ALT002	Mic Wireless	15	0	0	Tersedia	 
<input type="checkbox"/>	ALT003	Speaker	15	0	0	Tersedia	 
<input type="checkbox"/>	ALT004	Proyektor	15	0	0	Tersedia	 
<input type="checkbox"/>	ALT005	Wireless Portable Speaker	15	0	0	Tersedia	 
<input type="checkbox"/>	ALT006	Laptop	15	0	0	Tersedia	 
<input type="checkbox"/>	ALT007	Monitor	15	0	0	Tersedia	 

Rofi Abdullah © 2018   

Figure 16. The Tools Data

## 3.5. Common User Module

In this application, The Common User just have the right only too see the event details. To get the event details, The Common User should access The Event Calendar Display first (Figure 17).

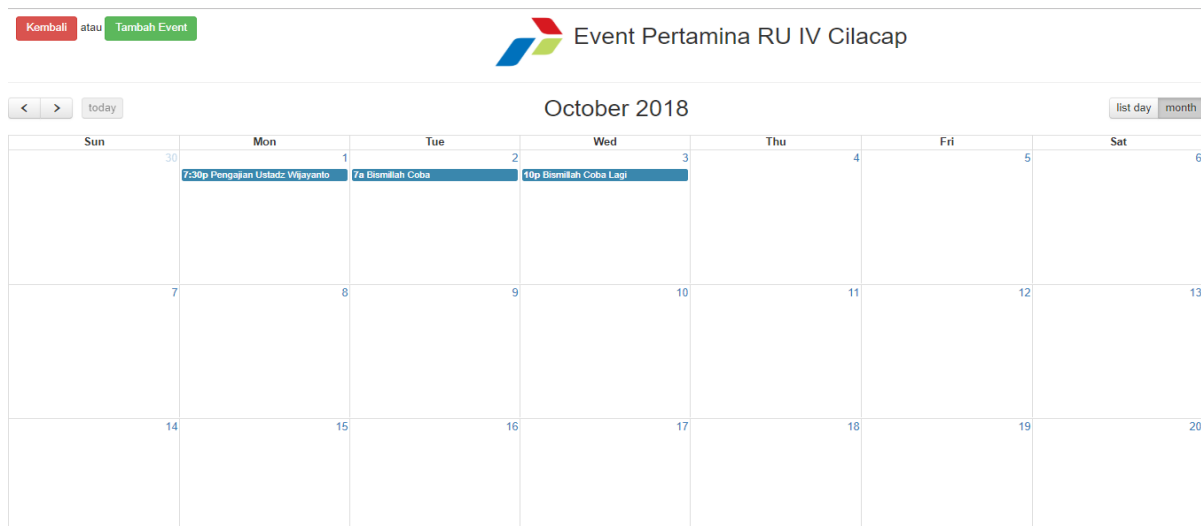


Figure 17. The Event Calendar Display for User Pertamina and Common User

From the figure above, they can obtain information about the event held by PT Pertamina (Persero) RU IV Cilacap just by Click The Event on Event Calendar Display. The Result will be shown in Figure 18.

### Pengajian Ustadz Wijayanto

ID Acara	:	EVT012
Judul Acara	:	Pengajian Ustadz Wijayanto
Mulai	:	19:30:00
PIC Acara	:	BDI RU IV
Lokasi Acara	:	Lapangan RU IV Komperta Donan

Tutup

Figure 18 . The Event Details Display for Common User

### 3.6. Black Box Testing

In this testing stage, the author use black box testing because this method no need deep knowledge in programming language and how to implement it. In other case, Black Box Testing do a test in the viewpoint of user (Nidhra & Dondeti, 2012). If the application can minimize the mistakes, getting smaller mistakes, getting bigger functionality so it can be the good application.

Table 2. The Result of Black Box Testing

No.	Scenario	Test Case	Test Result	Status (pass / fail)
1.	Web Parsing Features	Parsing the database and spatial data from the destination website	Get all data needs from the destination website, then the data was stored to the systems	pass
2.	Login Testing	Select user access right by inputting username and password	After validate, user will redirect to admin page when successfully or show error message when failed	pass
3.	Database and spatial data management	Editing basic data and spatial data by admin	The data was modified successfully by admin	pass
4,	Record Event	Fill the event details and needs, then display in the form of event calendar	The event was successfully displayed in the form of event calendar and when we click the event, the detailed event will be displayed	pass

#### 4. CONCLUSION

According to the testing, results, and discussions of research conducted in PT Pertamina (Persero) RU IV Cilacap, this application can bring the management of the events from conventional way to the way of information technology. Now, the admin can store the event data in the database, not in the book. This application also can help The Technician / PIC Sound System to prepare the event needs just by looking the event calendar dashboard.

This application is still far from perfect, but the author has hope to improve the system to be better. Suggestion received by author for improve the system are: a) better admin report for the event that has been done; b) better table structure for what's new message; c) better decision support system.

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